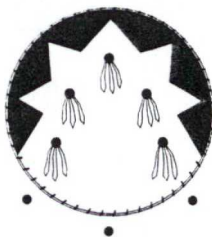


# WHITE SHIELD



# ENVIRONMENTAL

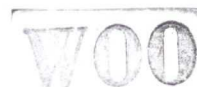
P.O. Box 477 Grandview, WA 98930-0477

June 26, 1996

(509) 882-1144 Fax (509) 882-4566

Mr. Jo Miles  
City of Toppenish  
21 West First Street  
Toppenish, WA 98948

JUN 28 1996



Re: Stockpile Sample Results

Dear Mr. Miles:

White Shield, Inc. (WSI) collected four soil samples from the stockpile located at the Wastewater Treatment Plant on Annahat Road, Toppenish, WA, on June 3, 1996. A site map is attached for your convenience. (See Appendix A). The stockpile measured 90 feet in length, 14 feet wide and approximately 2.5 feet in depth.

Four soil samples were collected and submitted to OnSite Environmental Inc., Redmond, Washington, for analyses. Two of the samples COT-0196-103 and 104 were composited at the laboratory. All of the samples were analyzed with WTPH-D method for diesel fuel contaminants. The laboratory analytical results are enclosed in the table below:

Sample	Location	WTPH-D
COT-0196-101	Stockpile	51 ppm
COT-0196-102	Stockpile	73 ppm
COT-0196-103	Stockpile	360 ppm
COT-0196-104	Stockpile	

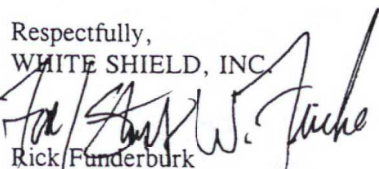
Results are in parts per million (ppm).

Copies of the laboratory analytical report and chain of custody are attached as Appendix B. Based on the soil analyses the stockpile soil is considered a Class 3 soil, according to Guidance for Remediation of Releases from Underground Storage Tanks, TABLE V End Use for Petroleum Contaminated Soils. (Appendix C) Therefore, further remediation is recommended.

White Shield Inc., recommends that the stockpile soil be spread and cultivated out to a depth of approximately 18 inches, and add nitrogen to the soil to enhance the natural biodegradation. The stockpile must be kept moist by sprinkling water approximately every 8 to 10 days, which will enhance the remediation process. We can provide you the technical assistance necessary to begin the bioremediation process by determining the necessary nitrogen requirements and other factors necessary to achieve remediation of the stockpile. Based upon this approach, resampling of the stockpile should occur again in September or October.

We appreciate the opportunity to provide you with technical assistance for your project. Please call us at (509) 882-1144 if you have any questions or comments.

Respectfully,  
WHITE SHIELD, INC.

  
Rick Funderburk  
Environmental Technician

cc: Environmental Protection Agency, Region X, Robert Cutler

A Certified ALPHA Bioremediation Company



USEPA REG



0001118

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# APPENDIX A

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**WHITE SHIELD**

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P.O. Box 477  
Grandview, WA 98930-0477



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**ENVIRONMENTAL**

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(509)882-1144 VOICE  
(509)882-4566 FAX



# WHITE SHIELD

INC.

P.O. BOX 477, 801 GRANDRIDGE ROAD, GRANDVIEW, WA 98930  
TELEPHONE: (509) 882-1144 VOICE (509) 882-4566 FAX

JOB

LOT-0196

SHEET NO.

1

OF

1

CALCULATED BY

-

DATE

-

CHECKED BY

-

DATE

-

SCALE

NTS

WASTEWATER TREATMENT  
PLANT

GATE

FENCE

DIRTY ROAD

STOCKPILE

FENCE

ANNAHAT ROAD

SITE SKETCH





# WHITE SHIELD

INC.

P.O. BOX 477, 801 GRANDRIDGE ROAD, GRANDVIEW, WA 98930  
TELEPHONE: (509) 882-1144 VOICE (509) 882-4566 FAX

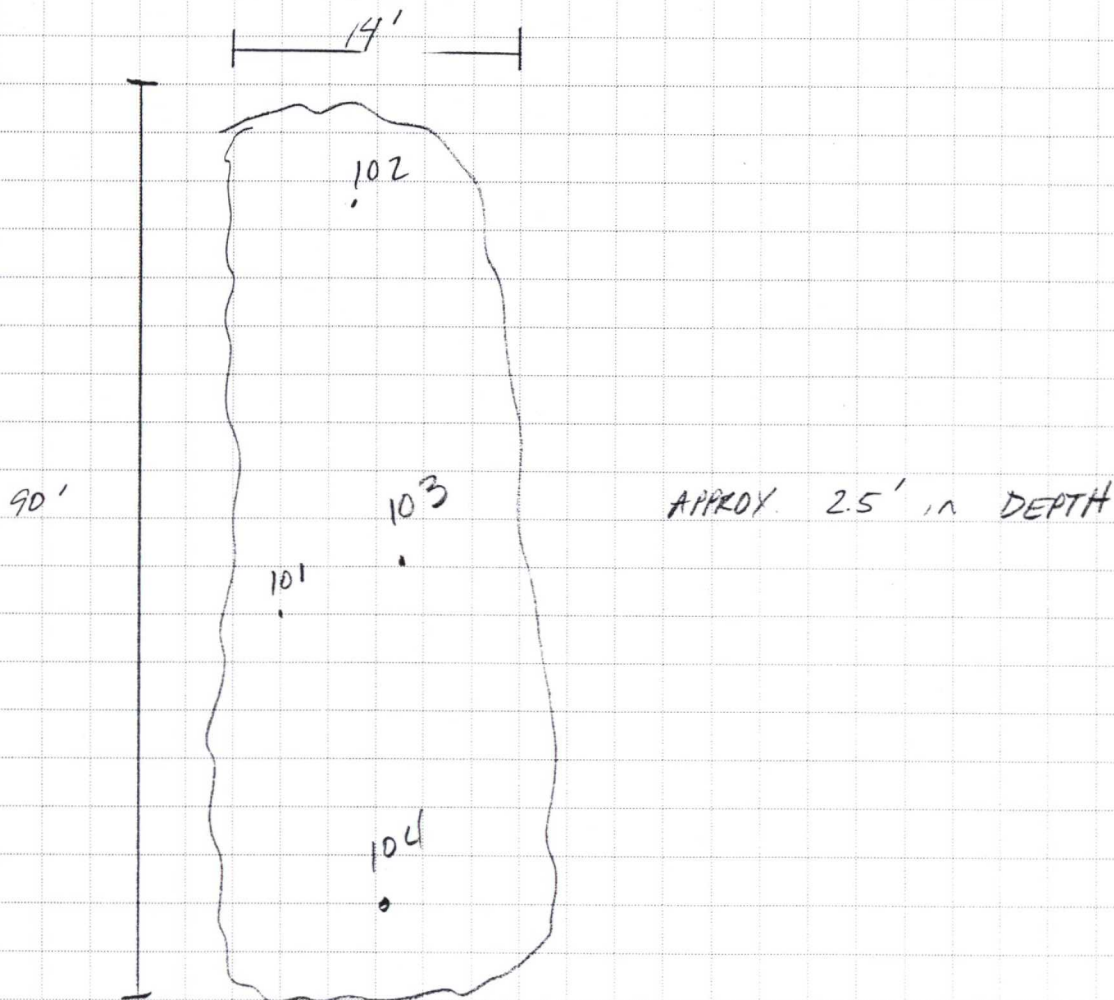
JOB COT-0196

SHEET NO. 1 OF 1

CALCULATED BY - DATE -

CHECKED BY - DATE -

SCALE NTS



**SAMPLE LOCATION SKETCH**

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# APPENDIX B

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**WHITE SHIELD**

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P.O. Box 477  
Grandview, WA 98930-0477



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**ENVIRONMENTAL**

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(509)882-1144 VOICE  
(509)882-4566 FAX

June 6, 1996

Rick Funderburk  
White Shield, Inc.  
P.O. Box 477  
Grandview, WA 98930

Re: Analytical Data for Project COT-0196  
Laboratory Reference No. 9606-007

Dear Rick:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on June 4, 1996.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

Karl P. Hornyik  
Project Chemist

Enclosures

2

Date of Report: June 6, 1996  
Samples Submitted: June 4, 1996  
Lab Traveler: 06-007  
Project: COT-0196

**WTPH-D**

Date Extracted: 6-04-96  
Date Analyzed: 6-04-96

Matrix: Soil  
Units: mg/Kg (ppm)

Client ID	Lab ID	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
COT-0196-101	06-007-1	1.0	<b>51</b>	97%		25
COT-0196-102	06-007-2	1.0	<b>73</b>	105%		25
COT-0196-103, 104	06-007-3,4	1.0	<b>360</b>	107%		25

\* o-Terphenyl

3

Date of Report: June 6, 1996  
Samples Submitted: June 4, 1996  
Lab Traveler: 06-007  
Project: COT-0196

**WTPH-D**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 6-04-96  
Date Analyzed: 6-04-96

Matrix: Soil  
Units: mg/Kg (ppm)

Lab ID: MB0604S1

	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
Method Blank	1.0	ND	103%		25

\* o-Terphenyl



Date of Report: June 6, 1996  
Samples Submitted: June 4, 1996  
Lab Traveler: 06-007  
Project: COT-0196

**WTPH-D**  
**DUPLICATE QUALITY CONTROL**

Date Extracted: 6-04-96  
Date Analyzed: 6-04-96

Matrix: Soil  
Units: mg/Kg (ppm)

Lab ID: 06-007-2

	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
Sample	1.0	68.1	105%		25
Duplicate	1.0	72.8	101%		25
RPD		6.6%			

\* o-Terphenyl

5

Date of Report: June 6, 1996  
Samples Submitted: June 4, 1996  
Lab Traveler: 06-007  
Project: COT-0196

**WTPH-D**  
**SB/SBD QUALITY CONTROL**

Date Extracted: 6-04-96  
Date Analyzed: 6-04-96

Matrix: Soil  
Units: mg/Kg (ppm)

Lab ID: SB0604S1

	Dilution Factor	Total Petroleum Hydrocarbons	Percent Recovery	Surrogate Recovery*	Flags	MRL
Spike Blank @ 100 ppm	1.0	87.2	87%	117%		25
Spike Blank Duplicate	1.0	85.9	86%	114%		25
RPD		1.5%				

\* o-Terphenyl

Date of Report: June 6, 1996  
Samples Submitted: June 4, 1996  
Lab Traveler: 06-007  
Project: COT-0196

Date Analyzed: 6-4-96

#### % MOISTURE

Client ID	% Moisture
COT-0196-101	10
COT-0196-102	7.0
COT-0196-103, 104	4.0

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# APPENDIX C

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**WHITE SHIELD**

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P.O. Box 477  
Grandview, WA 98930-0477



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**ENVIRONMENTAL**

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(509)882-4566 FAX



TABLE V. END USE CRITERIA FOR PETROLEUM-CONTAMINATED SOILS					
Analyte	Analytical Method	Soil Class (ppm)			
		1	2	3	4
Heavy fuel hydrocarbons (C24-C30)	WTPH-418.1 mod.	<60	60-200	200-2000	>2000
Diesel (C12-C24)	WTPH-D	<25	25-200	200-500	>500
Gasoline (C6-C12)	WTPH-G	<5	5-100	100-250	>250
Benzene	8020	<0.005	0.005-0.5	≤0.5	>0.5
Ethylbenzene	8020	<0.005	0.005-20	≤20	>20
Toluene	8020	<0.005	0.005-40	≤40	>40
Xylenes (total)	8020	<0.005	0.005-20	≤20	>20

Treatment is recommended for all Class 3 and 4 soils.

#### NOTES:

##### Class 1 Soil Uses:

Any use which will not cause threat to human health or the environment.

##### Class 2 Soil Uses:

Backfill at the cleanup site

Fill in commercial or industrial areas

Cover or fill in permitted landfills

Road subgrade or other road construction fill

Fill in or near: wetlands, surface water, ground water, drinking water wells or utility trenches is NOT recommended. Use as residential topsoil is also NOT recommended.

##### Class 3 Soil Uses:

Treatment

Disposal at the original site (no solid waste disposal permit needed)

Road construction (no solid waste disposal permit needed)

Use or disposal in permitted, municipal landfills

Permitted as a new PCS landfill

(An evaluation should be made to ensure that disposal will not cause a threat to human health or the environment, e.g. use near water bodies)

##### Class 4 Soil Uses:

Treatment

Disposal in a permitted, municipal landfill

Permitted as a new PCS landfill